

In the claims:

Claims 1-5 cancelled.

6. (New) A method of complex treatment of diesel fuel, comprising the steps of heating diesel fuel; homogenization and separation in a centrifugal force field in a rotor-disk vortex apparatus; fine filtration at a filtering porous partition of hydrophobias material, said heating of diesel fuel including carrying out the heating during a process of circulation in a closed circuit including a heat exchanger and the rotor-disk vortex apparatus of an open type; additional filtration carried out by a multilayer filter-reactor comprising granules of multifunctional catalyst, alkylating aromatic compounds, and a layer of transitional metals or transitional metal oxides.

7. (new) A method as defined in claim 6; and further comprising carrying out the additional filtration at temperature of fuel being treated 25-45°C and a pressure differential at a filter-reactor up to 0.2.